

4.5 Operations, Administration and Provisioning Requirements

No new requirements.

4.6 Maintenance Requirements

No new requirements.

4.7 Initialization and Recovery Requirements

No new requirements.

4.8 Capacity, Performance, and Reliability Requirements

No new requirements.

4.9 Subscriber Limitations and Restrictions

No new requirements.

5. Open Issues

The Maryland Team has prepared this set of requirements under the assumption that any minor changes that could be accommodated for a 2nd Quarter vendor release of LNP would be reflected in the original document or in the requirements section above. Those needs that could not be accommodated for a 2nd Quarter vendor release are shown under the Open Issues section.

Bell Atlantic has identified the following issues that must be resolved to their satisfaction prior to implementation of LNP within the Bell Atlantic territory. Bell Atlantic is currently working with Bellcore and several other companies to address/resolve these issues via the Bellcore Generic Requirements process. The issues are noted here for completeness in the MD Requirements document. Detailed requirements addressing these issues will be documented in Bellcore requirements.

- 1) A mechanism is needed to limit the number of queries for calls to non-ported telephone numbers.
- 2) BA would like to limit the LNP triggers to those using the AIN 0.1 protocol. This is not really an issue for MD but is an issue for the Bell Atlantic territory.
- 3) Additional features or services that currently follow existing industry standards but will not function in an LNP environment must be identified.
- 4) BA would like to limit AMA recording associated with LNP queries, so that "flat rate calls" only result in switch AMA record(s) when an LNP query is performed. BA views the need to activate AMA recording on all "flat rate calls" to insure the recording of LNP queries as excessive. The existing Illinois Switching GR requirement for a switch to generate a AIN AMA record (Structure Code 220 or 221) for an LNP query when the LNP SCP database returns an AMA recording indication (i.e. the AMASlpID parameter) may be sufficient to meet this need in a Service Provider portability environment. The Maryland NP Consortium Billing & Rating sub-team is awaiting a Bell Atlantic decision on the acceptability of this alternative.
- 5) The Maryland Number Portability Consortium Billing & Rating Requirements Team reviewed the proposed additional AMA requirements to the IL Switching GR for "IXC Access Billing" dated 2/16/96. Recommendations were made from the Maryland sub-team to expand the AMA access record types to which the additional requirements apply to include NS800 records and non-FGD IXC access records. These changes were subsequently incorporated in the 2/28/96 version of the proposed additional AMA requirements by the Illinois Number Portability Workshop Billing & Rating sub-team. The Maryland Number

Portability Consortium Billing & Rating Requirements Team believes that these additional AMA requirements for "IXC Access Billing" are necessary for the initial deployment of LNP in Maryland (see attachment A).

- 6) Bell Atlantic would like an additional switch requirement to facilitate IC/INC Access AMA recording. In order to insure that IC/INC Access AMA records generated at a terminating LATA Access Tandem exchange are complete, Bell Atlantic feels it is necessary to require any Access Tandem receiving a call to a portable number from an IC/INC for which the LNP query has not been performed, to perform the LNP query. If the AT does not perform an LNP query for such an IC/INC call, the Terminating Access AMA record produced by the AT will not correctly identify the actual terminating wire-center (e.g. exchange) on which to compute the "airline mileage" component of the IC/INC access charge (see the note for proposed additional requirement REQ-1195 in Attachment A). Since the existing IL GR switch requirements support the provisioning of LNP triggers, used to launch an LNP query based on detection of a called portable NPA-NXX, on intermediate exchanges such as an AT, this would appear to be an issue with individual service provider implementation and not an issue for additional switch requirements

Issue 0.1

March 26, 1996

Draft

Generic
OPERATOR SERVICES SWITCHING
Requirements for Number Portability
in MARYLAND

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1.0 Document Intent

This document is intended to capture the requirements for Operator Services in the state of Maryland given the introduction of Number Portability in that region.

2.0 Document Status and Update

This document will retain a "Draft" status until it has been accepted by the Maryland LNP Operator Services Subteam, at which time it will be removed. Any updates of this document will cause the issue number to be incremented.

3.0 Requirements

3.1 Generic Requirements

It has been agreed by the Maryland LNP Operator Services Subteam that the document, "Generic Operator Services Switching Requirements for Number Portability (Final Draft, Feb 14, 1996)", will form the basis for the requirements in Maryland.

Concerns or changes from that document that are specific to Maryland are documented in the following section.

3.2 Maryland Specific Concerns and Requirements

Bell Atlantic has a major concern so noted for the record regarding the Operator Services Switching requirements for alternately billed calls. The current draft of the requirements provides for an OSS query to the LNP SCP to determine the LRN of the billed number for inclusion in an AMA module. The routing for an ABS validation query will be done via a 10 digit Global Title Translation during the processing of the regular LIDB query. The LIDB line level Service Provider ID, returned in the LIDB query response and planned for April, 1997 Release 8.1 of the LIDB should be used for the billing information. The ability for the OSS to "dip" the LNP SCP on the billing number is redundant and could add to the call setup duration

Last Page

Note to Maryland team. This example is currently being reviewed by Steve Addicks, MCImetro. Changes are anticipated, and will be incorporated in the new release of the Illinois OSS doc.

2.1.9 "Worst Case" example

In this example, a Bill to Third Number call (with authorization) is described. The Calling Number, the Called Number, and the Third Number have all been ported, and are all in different zones of portability.

The OSS is populated with the portable NPA-NXXs in its own zone, as well as those in zone C. Zone A is provisioned so that number portability information (eg LRNs) from zone A are looked up at the LNP SCP in zone A, whereas numbers from zone C are sent to zone C to be queried.

Neither the OSS nor the rest of the zone A network contains any portability information from zone B. Therefore, any call routing or queries on portable numbers in zone B will be treated by zone A as non-portable. This provides an illustration of an OSS (LNP capable or non-capable) launching a query into a zone of portability about which it has no knowledge.

As throughout these example call flows, it is assumed that LIDB queries populate only 6 digits in the SCCP layer. LNP queries populate 10 digits in the SCCP layer.

This example was chosen in an attempt to create a worst case scenario, involving all portable numbers, in different zones of portability. It is intended to illustrate technical requirements, and may not represent a realistic business model. This call flow illustrates an LNP query within its own zone of portability (Calling Party number), a LIDB query and a call routing to a distant zone of portability for which the OSS has no knowledge (zone B), and an LNP query to a distant zone of portability where the OSS knows that a number is portable, but must obtain final routing and portability information from the distant zone of portability (zone C).

A Calling Card Validation would be very similar to this example, but would not require routing a call into zone B (authorization), and would include 14 digits in the TCAP portion of the LIDB query messages.

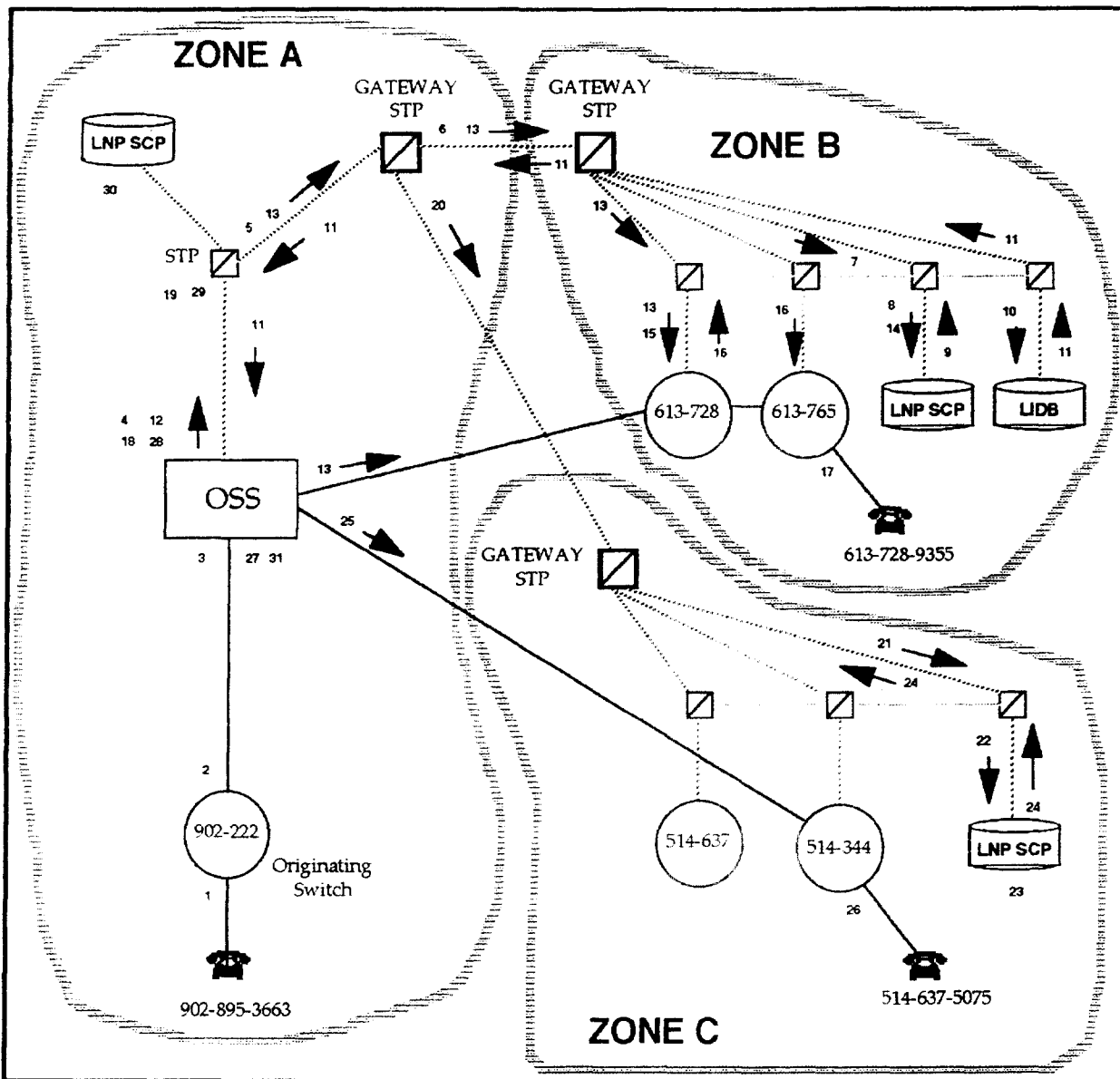


Figure 9 - Worst Case scenario - Third Party (Authorization required) - Three different zones of portability.

1. Line A (902-895-3663) dials 0-514-637-5075.
2. The Originating Switch performs digit analysis on the dialed digits to determine how to route the call. The originating switch determines the trunk to the OSS, seizes it and establishes a connection with the OSS.
3. The OSS sends a bong to the subscriber. The subscriber indicates that the call is Third Party and provides the Billing Number to the operator system (613-728-9355).

LIDB query

4. The OSS checks the Third Number against its internal list of portable NPA-NXXs, but does not find a match (zone A has no knowledge of zone B portable NPA-NXXs). The OSS sends a LIDB query with only the first six digits (NPA-NXX) of the Third Number in the SCCP Called Party Address Field and the ten digits of the Third Number in the TCAP (application layer) of the LIDB query. The OSS routes this LIDB query its local STP.

MTP	OPC: OSS	DPC: local STP
SCCP	CgPA: PC=OSS, SSN=OSS	CdPA: GTT (613-728, TT=LIDB)
TCAP	BN: 613-728-9355	

5. The STP receives the query and looks up the GTA of 613-728 in the six digit GTT table identified by the Translation Type. Since 613-728 is outside this zone, the GTT table has been populated (in this example) to indicate that only a non-final translation should occur, with the message being forwarded to the Gateway STP.

MTP	OPC: local STP	DPC: Gateway STP - zone A
SCCP	CgPA: PC=OSS, SSN=OSS	CdPA: GTT (613-728, TT=LIDB)
TCAP	BN: 613-728-9355	

6. The Gateway STP receives the query, looks up the GTA in the six digit GTT table identified by the Translation Type. The GTT table has been populated to provide a non-final destination of the Gateway STP in zone B.

MTP	OPC: Gateway STP - zone A	DPC: Gateway STP - zone B
SCCP	CgPA: PC=OSS, SSN=OSS	CdPA: GTT (613-728, TT=LIDB)
TCAP	BN: 613-728-9355	

7. The distant Gateway STP receives the query and looks up the GTA of 613-728 in the six digit GTT table identified by the Translation Type. Since 613-728 has been designated as a portable NPA-NXX, the GTT table will have been populated to indicate that only a non-final translation should occur, with the message being forwarded to the LNP SCP for final translation.

MTP	OPC: Gateway STP - zone B	DPC: distant STP
SCCP	CgPA: PC=OSS, SSN=OSS	CdPA: GTT (613-728, TT=LIDB)
TCAP	BN: 613-728-9355	

8. The distant STP receives the query and forwards it to the LNP SCP.

MTP	OPC: distant STP	DPC: distant LNP SCP
SCCP	CgPA: PC=OSS, SSN=OSS	CdPA: GTT (613-728, TT=LIDB)
TCAP	BN: 613-728-9355	

9. The LNP SCP receives the query. It looks into the TCAP CdPN to determine the 10 digit DN for translation, then uses the 10 digit LIDB translation table to determine the point code of the correct LIDB for the BN. The translation is set to final.

MTP	OPC: distant LNP SCP	DPC: distant STP
SCCP	CgPA: PC=OSS, SSN=OSS	CdPA: PC=LIDB, SSN=LIDB

TCAP	BN: 613-728-9355	
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10. The query is passed through the network (may be via internal network, or to via another Gateway STP to another network if LIDB belongs to another service provider) to the LIDB, which receives the query. It accesses the TCAP CdPN to get the 10 digit DN for translation. It determines that a third party call is acceptable for this DN, but authorization is required. It then swaps the CgPA and CdPA to route the response back to the originating OSS.

MTP	OPC: distant LNP SCP	DPC: distant STP
SCCP	CgPA: PC=LIDB, SSN=LIDB	CdPA: PC=OSS, SSN=OSS
TCAP	Reply: OK, but authorization required	

11. The response is routed back through the network to the OSS, which receives the response.

BN Routing

12. The OSS initiates a call to the Third Party Number to obtain authorization. The first leg of the call terminates on the donor switch for the BN in zone B. The OSS initiates the call by sending an ISUP Initial Address Message (IAM).

MTP	OPC: OSS		DPC: donor switch for BN	
ISUP	CgPN: OSS	CdPN: 613-728-9355	GAP:	FCI:

13. The message is routed through the networks to the donor switch, and the first leg of the call is set up.

14. The donor switch looks at the CdPN, determines that it is portable, and launches an LNP query to its own LNP SCP.

MTP	OPC: donor switch for BN	DPC: LNP SCP - zone B
SCCP	CgPA: PC & SSN=donor switch	CdPA: GTT (613-728-9355, TT=LNP)
TCAP	BN: 613-728-9355	

15. The LNP SCP receives the query. It looks into the TCAP CdPN to determine the 10 digit DN for translation, then uses the 10 digit LRN translation table to determine the LRN of the correct switch for the CdPN. It puts the LRN into the CdPN field of the reply, and swaps the CgPA and the CdPA in the SCCP layer.

MTP	OPC: LNP SCP - zone B	DPC: donor switch for BN
SCCP	CgPA: GTT (613-728-9355, TT=LNP)	CdPA: PC & SSN=donor switch
TCAP	BN: 613-728-9355	

16. The reply is received by the donor switch (which is acting like an access tandem in this example). It saves the original CdPN digits in the GAP, and inserts the LRN in the CdPN field. It then routes the call to the BN recipient switch, by sending an ISUP IAM.

MTP	OPC: donor switch for BN		DPC: recipient switch for BN	
ISUP	CgPN: OSS	CdPN: 613-765-0000	GAP: 613-728-9355	FCI: set

17. The BN recipient switch receives the message, sees that the FCI is set, recognizes its own LRN, so it looks into the GAP to obtain the original CdPN digits, which it uses to complete the call to the Third Party Number. Assume that the third party authorizes the billing.

Note that in this example the OSS is not aware that the BN was ported, and therefore will not capture this information (specifically the LRN) in its own AMA record. This is due to the assumption that zone A maintains no portability information about zone B, either for routing or billing purposes.

CdPN Routing

18. The OSS receives authorization for the call to proceed. It determines that the CdPN has a portable NPA-NXX, and launches an LNP query.

MTP	OPC: OSS	DPC: local STP
SCCP	CgPA: PC & SSN=OSS	CdPA: GTT (514-637-5075, TT=LNP)
TCAP	CdPN: 514-637-5075	

19. The local STP looks up the 10 digits in the CdPA in its 10 digit LNP lookup table. Not finding a match, it then looks to its 6 digit LNP lookup table. Here it finds a non-final translation pointing to its Gateway STP.

MTP	OPC: local STP	DPC: Gateway STP - zone A
SCCP	CgPA: PC & SSN=OSS	CdPA: GTT (514-637-5075, TT=LNP)
TCAP	CdPN: 514-637-5075	

20. The Gateway STP receives the query, and looks up the GTA in the six digit GTT table identified by the Translation Type. The GTT table has been populated to provide a non-final destination of the Gateway STP in the home zone for the CdPN.

MTP	OPC: Gateway STP - zone A	DPC: Gateway STP - zone B
SCCP	CgPA: PC=OSS, SSN=OSS	CdPA: GTT (514-637-5075, TT=LNP)
TCAP	CdPN: 514-637-5075	

21. The distant Gateway STP receives the query and looks up the CdPA in the six digit GTT table identified by the Translation Type. The message is forwarded to the STP connected to the LNP SCP.

MTP	OPC: Gateway STP - zone B	DPC: distant STP
SCCP	CgPA: PC=OSS, SSN=OSS	CdPA: GTT (514-637-5075, TT=LNP)
TCAP	CdPN: 514-637-5075	

22. The distant STP receives the query and forwards it to the LNP SCP.

MTP	OPC: distant STP	DPC: distant LNP SCP
SCCP	CgPA: PC=OSS, SSN=OSS	CdPA: GTT (514-637-5075, TT=LNP)
TCAP	CdPN: 514-637-5075	

23. The LNP SCP receives the query. It looks into the TCAP CdPN to determine the 10 digit DN for translation, then uses the 10 digit LNP translation table to determine the LRN of the correct switch for the CdPN. It puts the LRN into the CdPN field of the reply, and swaps the CgPA and the CdPA in the SCCP layer.

MTP	OPC: distant LNP SCP	DPC: distant STP
SCCP	CgPA: GTT (514-637-5075, TT=LNP)	CdPA: PC=OSS, SSN=OSS
TCAP	CdPN: 514-344-0000	

24. The reply routes through the network to the OSS.
25. The OSS receives the reply. It saves the original CdPN digits in the GAP, and inserts the LRN in the CdPN field. It then routes the call to the Called Party recipient switch, by sending an ISUP IAM.

MTP	OPC: donor switch for BN		DPC: recipient switch for BN	
ISUP	CgPN: 902-895-3663	CdPN: 514-344-0000	GAP: 514-637-5075	FCI: set

26. The Called Party recipient switch receives the message, sees that the FCI is set, recognizes its own LRN, so it looks into the GAP to obtain the original CdPN digits, which it uses to complete the call.

CgPN Query

27. The OSS looks the Calling Party DN up in its internal list of portable NPA-NXXs. Because it is portable, the OSS wants to determine its LRN. The LRN is determined from (a) the incoming trunk group, or (b) a query to the LNP SCP. The next three steps are only required in case (b).
28. The OSS launches an LNP query based on the Calling Party DN of 902-895-3663.

MTP	OPC: OSS	DPC: local STP
SCCP	CgPA: PC & SSN=OSS	CdPA: GTT (902-895-3663, TT=LNP)
TCAP	CgPN: 902-895-3663	

29. The local STP looks up the 10 digits in the CdPA in its 10 digit LNP lookup table. It finds a non-final translation pointing to the local LNP SCP.

MTP	OPC: local STP	DPC: local LNP SCP
SCCP	CgPA: PC & SSN=OSS	CdPA: GTT (902-895-3663, TT=LNP)
TCAP	CgPN: 902-895-3663	

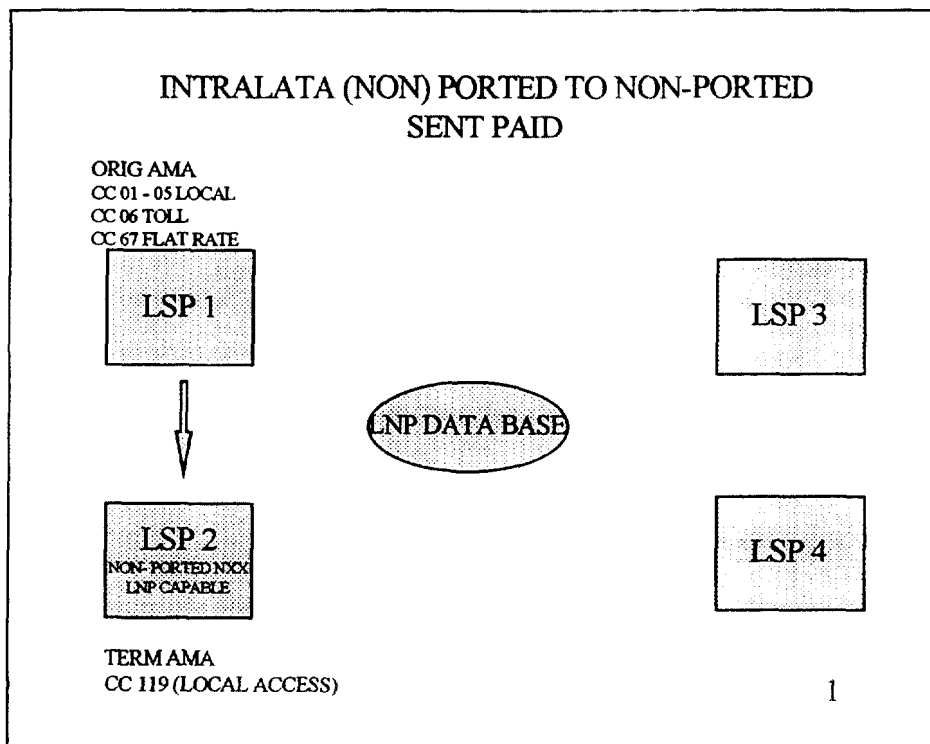
30. The LNP SCP receives the query. It looks into the TCAP CdPN to determine the 10 digit DN for translation, then uses the 10 digit LNP translation table to determine the LRN of the correct switch for the CdPN. It puts the LRN into the CdPN field of the reply, and swaps the CgPA and the CdPA in the SCCP layer.

MTP	OPC: distant LNP SCP	DPC: distant STP
SCCP	CgPA: GTT (902-895-3663, TT=LNP)	CdPA: PC=OSS, SSN=OSS
TCAP	CgPN: 902-222-0000	

30. The OSS receives the LNP SCP response and analyzes the data

AMA Record

31. An AMA record will be created for this call by the OSS. A flexible AMA module for the Calling Party and the Called Party will be appended to that record to contain the respective LRNs. In this example, the Billing Number is not known by the OSS to be ported, so no module will be appended for the BN

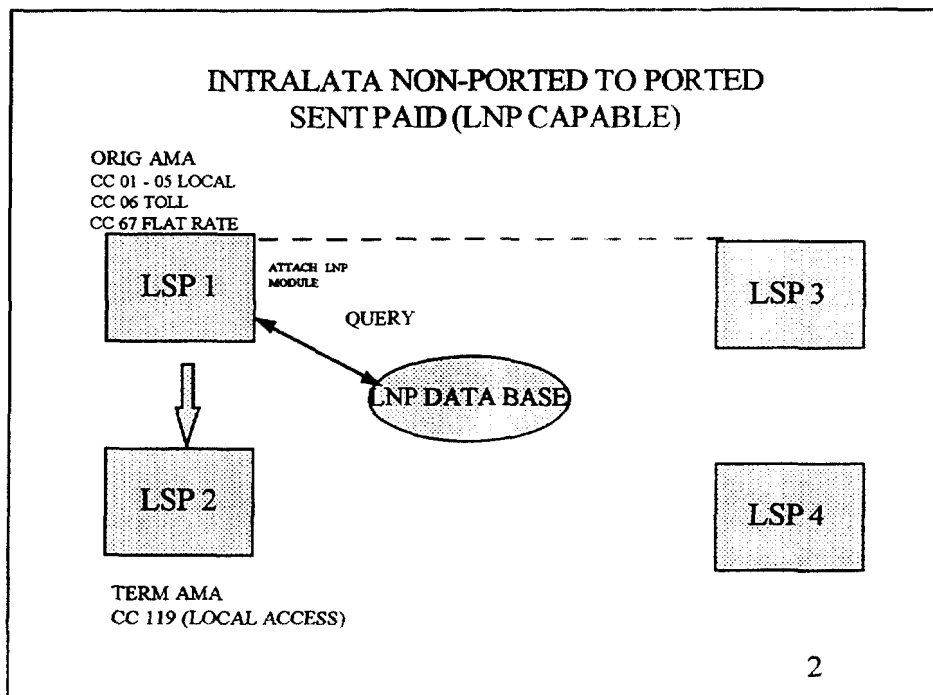


INTRALATA PORTED TO NON-PORTED SENT PAID

LSP1 - ORIGINATING AMA
CALL CODE 001-005 LOCAL
CALL CODE 006 - INTRALATA TOLL
CALL CODE 067 - FLAT RATE

LNP MODULE CAN BE ADDED TO ANY OF ABOVE

LSP2 - TERMINATING AMA
CALL CODE 119 -TERMINATING ACCESS
(NEW CALL CODE - LOCAL ACCESS)



INTRALATA NON-PORTED TO PORTED SENT PAID

LSP 1 - ORIGINATING AMA

CALL CODE 001-005 - LOCAL

CALL CODE 006 - INTERALATA TOLL

CALL CODE 067 - FLAT RATE

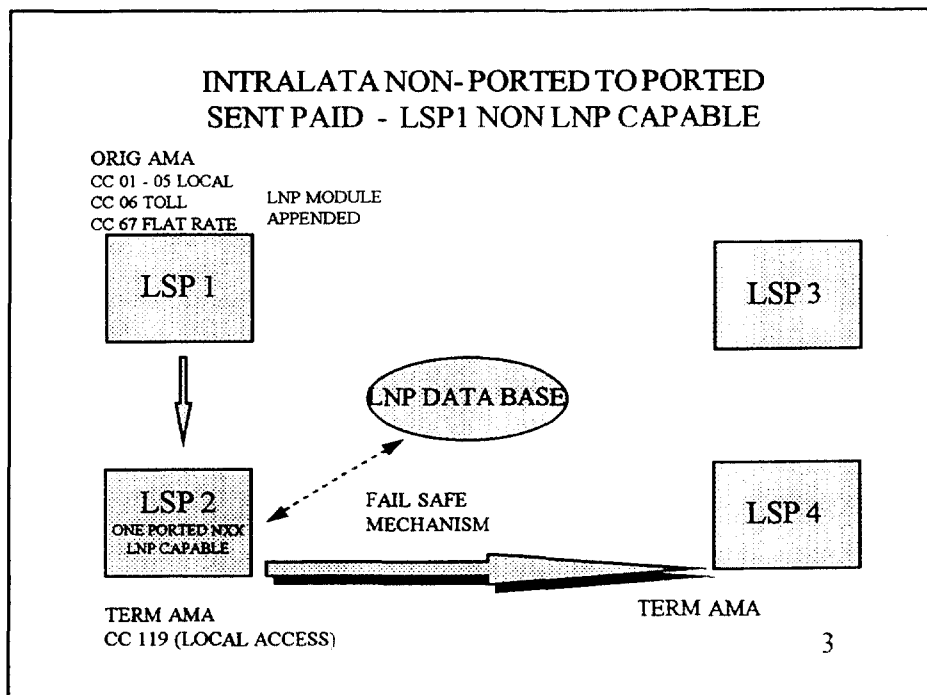
LNP MODULE CAN BE ADDED TO ANY OF THE ABOVE

LSP2 - TERMINATING AMA

CALL CODE 119 - TERMINATING ACCESS

(NEW CALL CODE - LOCAL ACCESS)

ORIGINAL DIALED NUMBER= _ _ _ _ _



**INTRALATA NON-PORTED TO PORTED
SENT PAID - LSP1 NON LNP CAPABLE**

LSP1 - ORIGINATING AMA

CALL CODE 001-005 - LOCAL

CALL CODE 006 - INTRALATA TOLL

CALL CODE 067 - FLAT RATE

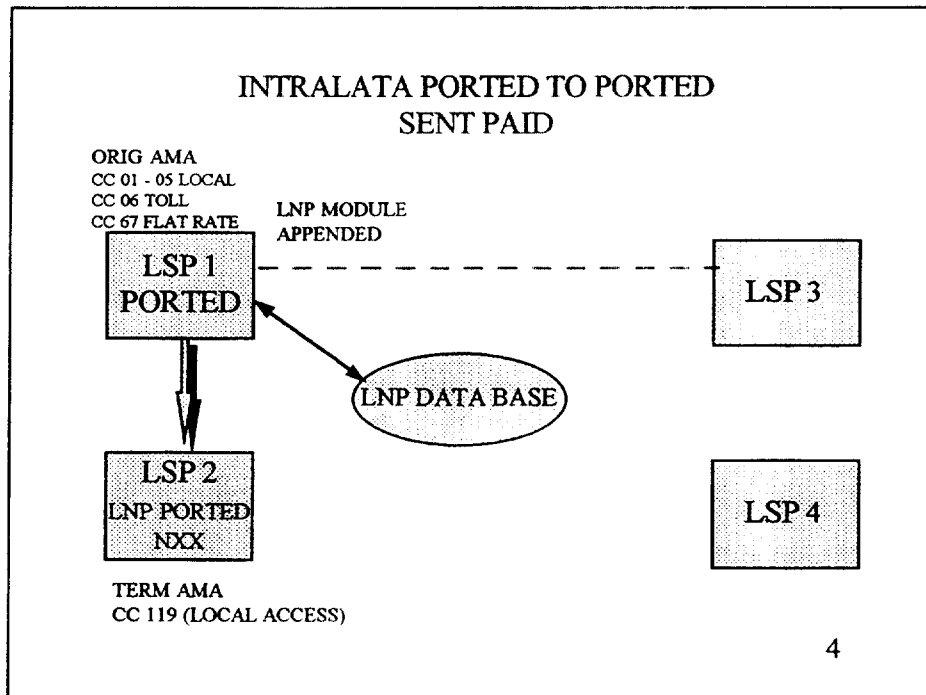
LSP2 - TERMINATION - MAKES LNP QUERY SINCE MESSAGE HAS NOT BEEN QUERIED

CALL CODE 119 - TERMINATING ACCESS CHARGED TO LSP1
(NEW CALL CODE - LOCAL ACCESS)

LNP MODULE ADDED TO EITHER ABOVE CALL CODES

LSP4

CALL CODE 119 - TERMINATING ACCESS CHARGED TO LSP2



INTRALATA PORTED TO PORTED - SENT PAID

LSP1 - ORIGINATING AMA

CALL CODE 001-005 - LOCAL

CALL CODE 006 - INTRALATA TOLL

CALL CODE 067 - FLAT RATE

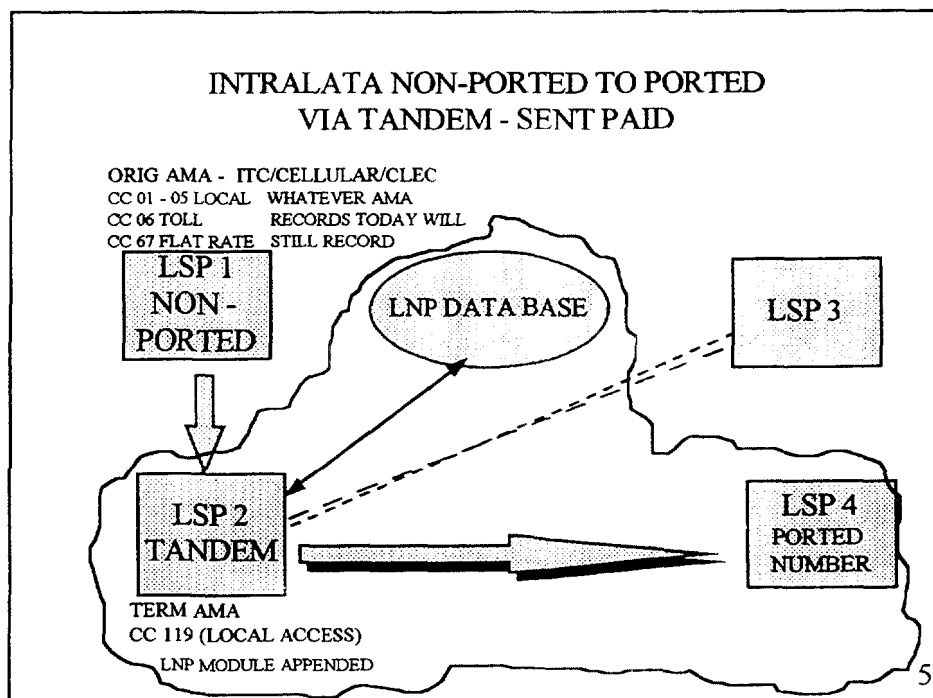
LNP MODULE CAN BE ADDED TO ANY OF ABOVE

LSP2

CALL CODE 119 - TERMINATING ACCESS

(NEW CALL CODE - LOCAL ACCESS)

ORIGINAL DIALED NUMBER = _ _ _ _ _



**INTRALATA NON-PORTED TO PORTED VIA TANDEM
SENT PAID**

WITHIN A PORTABLE NXX, A SINGLE NUMBER IS NOT PORTED. A QUERY MUST BE PERFORMED TO LEARN IF THIS PARTICULAR NUMBER HAS BEEN PORTED.

LSP1 - ORIGINATING AMA

CALL CODE 001-005 - LOCAL

CALL CODE 006 - INTRALATA TOLL

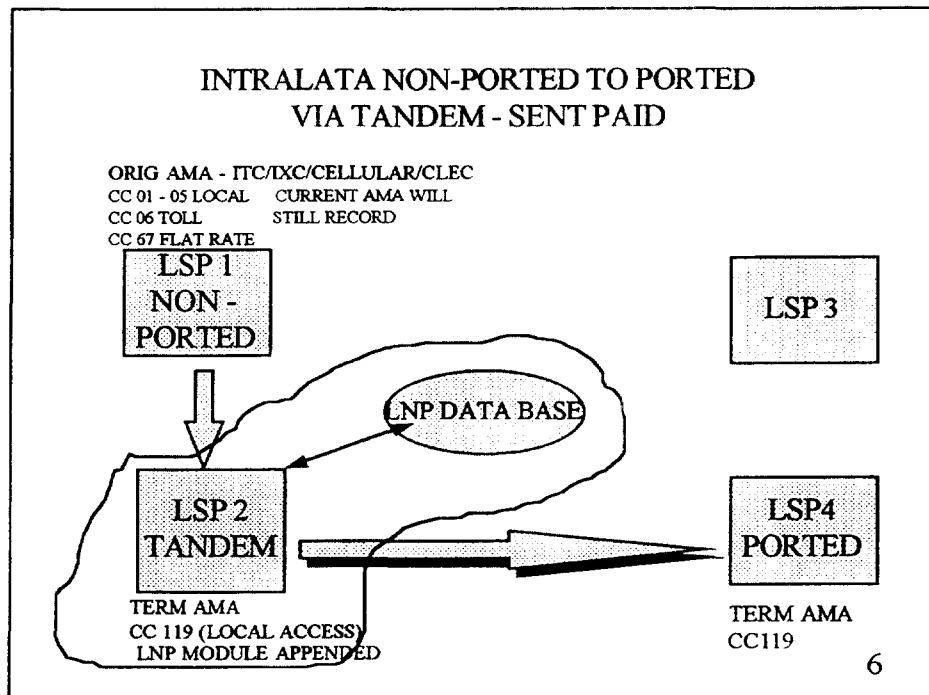
CALL CODE 067 - FLAT RATE

LSP2 TANDEM

CALL CODE 119 - TERMINATING ACCESS

(NEW CALL CODE - LOCAL ACCESS)

LNP MODULE CAN BE ADDED TO ABOVE

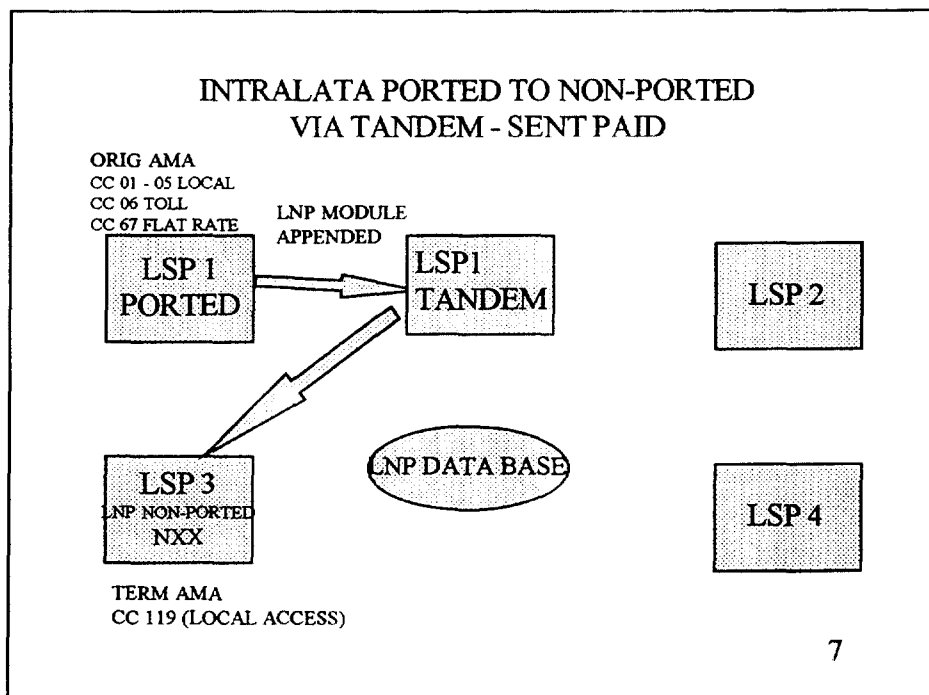


**INTRALATA PORTED TO NON-PORTED
VIA TANDEM - SENT PAID**

LSP1 - ORIGINATING AMA
 CALL CODE 001-005 - LOCAL
 CALL CODE 006 - INTRALATA TOLL
 CALL CODE 067 -FLAT RATE

LSP2 - TERMINATING AMA
 CALL CODE 119 - TERMINATING ACCESS
 (NEW CALL CODE- LOCAL ACCESS)
 LNP MODULE CAN BE ADDED TO EITHER OF ABOVE

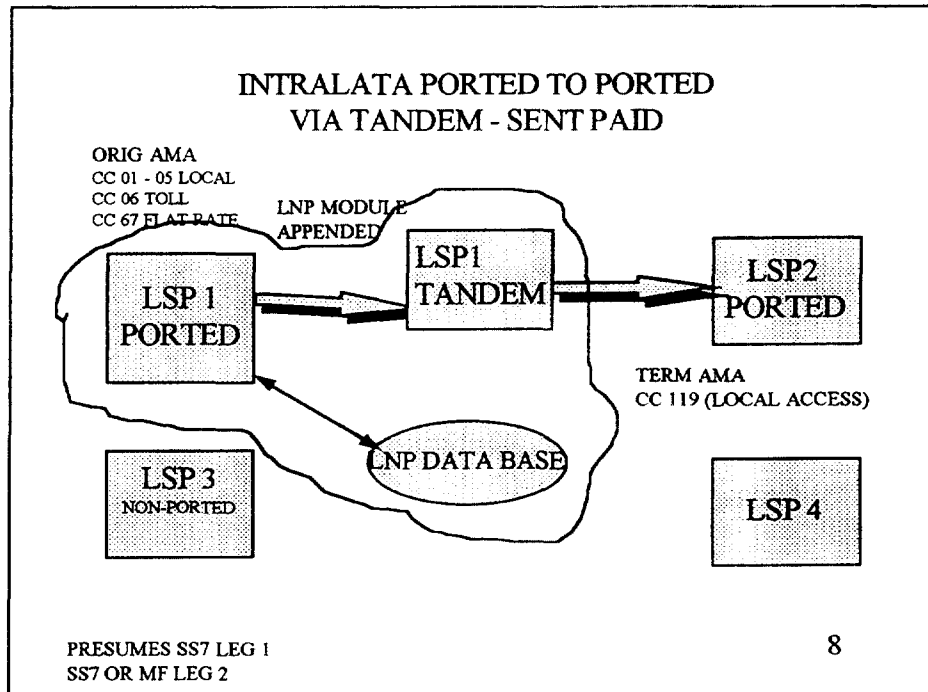
LSP3 - TERMINATING AMA
 CALL CODE 119 - TERMINATING ACCESS
 (NEW CALL CODE- LOCAL ACCESS)



**INTRALATA PORTED TO NON-PORTED
VIA TANDEM - SENT PAID**

LSP1 ORIGINATING AMA
CALL CODE 001-005 - LOCAL
CALL CODE 006 - INTRALATA TOLL
CALL CODE 067 - FLAT RATE
NO LNP QUERY IS MADE

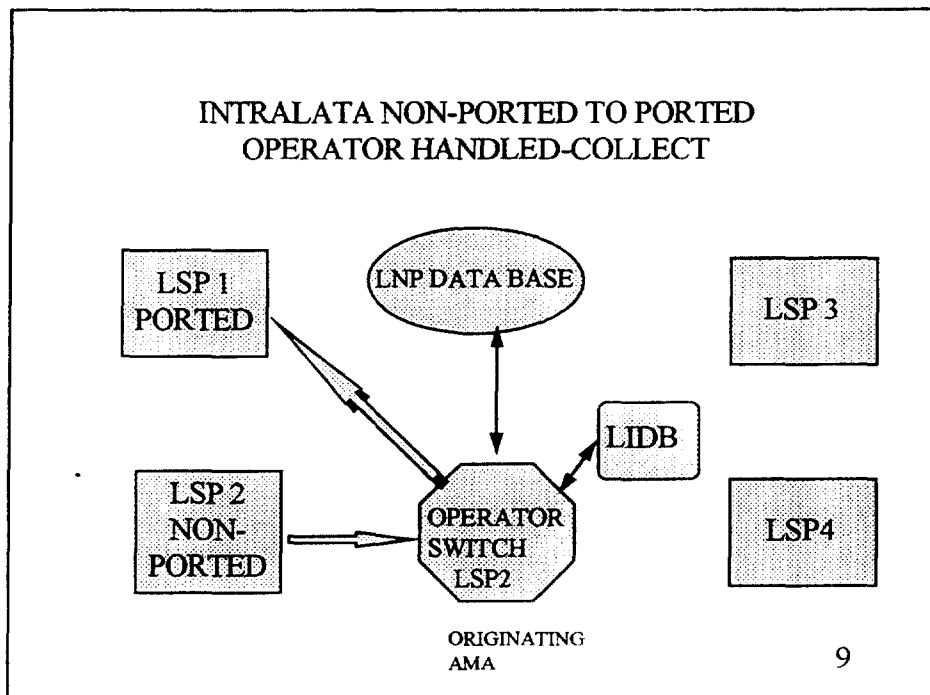
LSP 3 TERMINATING AMA
CALL CODE 119 - TERMINATING ACCESS
(NEW CALL CODE - LOCAL ACCESS)



**INTRALATA PORTED TO PORTED
VIA TANDEM - SENT PAID**

LSP1 - ORIGINATING AMA
CALL CODE 001-005 LOCAL
CALL CODE 006 - INTRALATA TOLL
CALL CODE 067 - FLAT RATE
LNP MODULE APPENDED TO ANY OF ABOVE

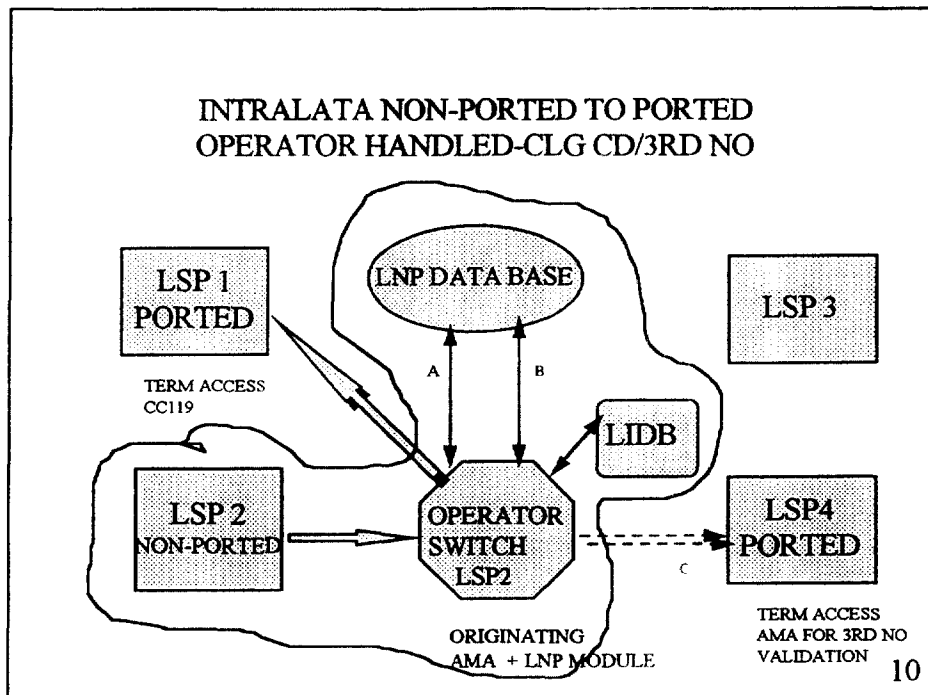
LSP2 - TERMINATING AMA
CALL CODE 119 - TERMINATING ACCESS
(NEW CALL CODE - LOCAL ACCESS)



INTRALATA NON-PORTED TO PORTED
OPERATOR HANDLED - COLLECT

LSP2 OPERATOR SWITCH - ORIGINATING AMA
 COLLECT AMA***
 LNP MODULE ADDED TO COLLECT RECORD
 LIDB AMA***

LSP1 - TERMINATING AMA
 CALL CODE 199 - TERMINATING ACCESS
 (NEW CALL CODE - LOCAL ACCESS)



**INTRALATA NON-PORTED TO PORTED OPERATOR HANDLED
CALLING CARD OR 3RD NUMBER**

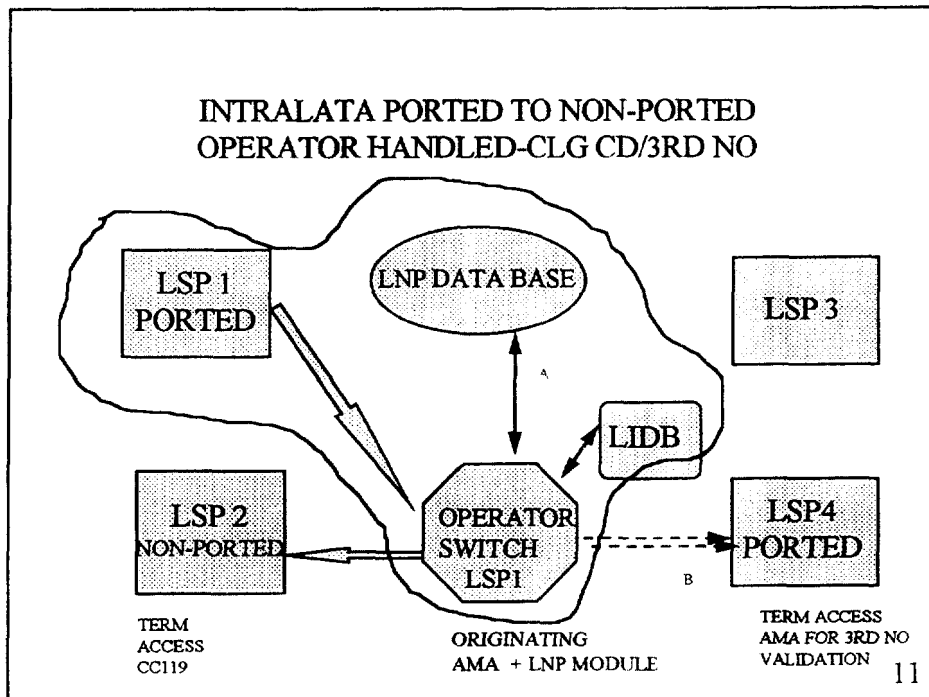
LSP 2 OPERATOR SWITCH RECORDS ORIGINATING AMA (CLG CD/3NO). LNP MODULE IS ADDED. OPERATOR SWITCH ALSO LAUNCHES QUERY TO ROUTE 3NO CALL FOR VERIFICATION. LNP MODULE IS ALSO ADDED TO VERIFICATION RECORD.

- A. QUERY TO ROUTE CALL
- B. QUERY TO DETERMINE ROUTE OF 3RD. NO.
- C. CALL FROM OPER TO VALIDATE 3RD. NO.

TWO QUERIES ARE MADE; ONE FOR ROUTING THE CALL TO PORTED NUMBER, THE SECOND FOR ROUTING THE CALL TO ANOTHER NETWORK TO VALIDATE THE 3RD. NUMBER.

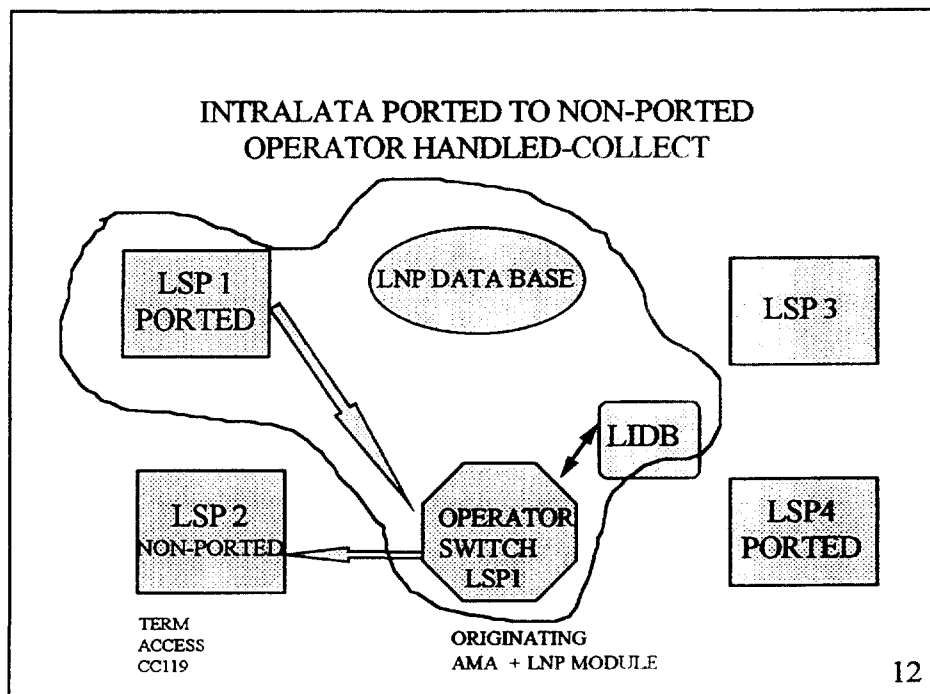
TERMINATING ACCESS IS CHARGED TO LSP 2 BY LSP 1 FOR ENTRY TO NETWORK TO REACH PORTED NUMBER.

TERMINATING ACCESS IS CHARGED TO LSP2 BY LSP 4 FOR CALL INTO NETWORK TO VALIDATE 3RD. NO.



INTRALATA PORTED TO NON-PORTED
OPERATOR HANDLED CALLING CARD/3RD NUMBER

- A. QUERY TO DETERMINE ROUTE OF 3RD. NO
- B. LIDB QUERY TO VALIDATE CLG CD/3NO
- C. CALL TO VALIDATE 3RD. NO.
- LSP1 -OP SWITCH - ORIGINATING AMA - CLG CD/3NO.
- LNP MODULE ADDED TO ORIGINATING RECORD
- A SINGLE QUERY IS MADE FOR ROUTING THE CALL TO ANOTHER NETWORK TO VALIDATE THE 3RD. NUMBER
- LSP2 - TERMINATING ACCESS
- CALL CODE 119 - TERMINATING ACCESS
- (NEW CALL CODE - LOCAL ACCESS)
- TERMINATING ACCESS IS CHARGED BY LSP 2 TO LSP 1 FOR ENTRY TO NETWORK TO REACH PORTED NUMBER
- TERMINATING ACCESS IS CHARGED TO LSP2 BY LSP 4 FOR CALL INTO NETWORK TO VALIDATE 3RD. NO



**INTRALATA PORTED TO NON-PORTED
OPERATOR HANDLED COLLECT**

A QUERY IS NOT NEEDED TO DETERMINE ROUTE OF CALLED NUMBER

ONE QUERY IS MADE TO THE LIDB TO VALIDATE THE CALLED NUMBER.

LSP1 OPERATOR SWITCH - ORIGINATING AMA-COLLECT

LSP2 - TERMINATING AMA

CALL CODE 119 - TERMINATING ACCESS

(NEW CALL CODE- LOCAL ACCESS)

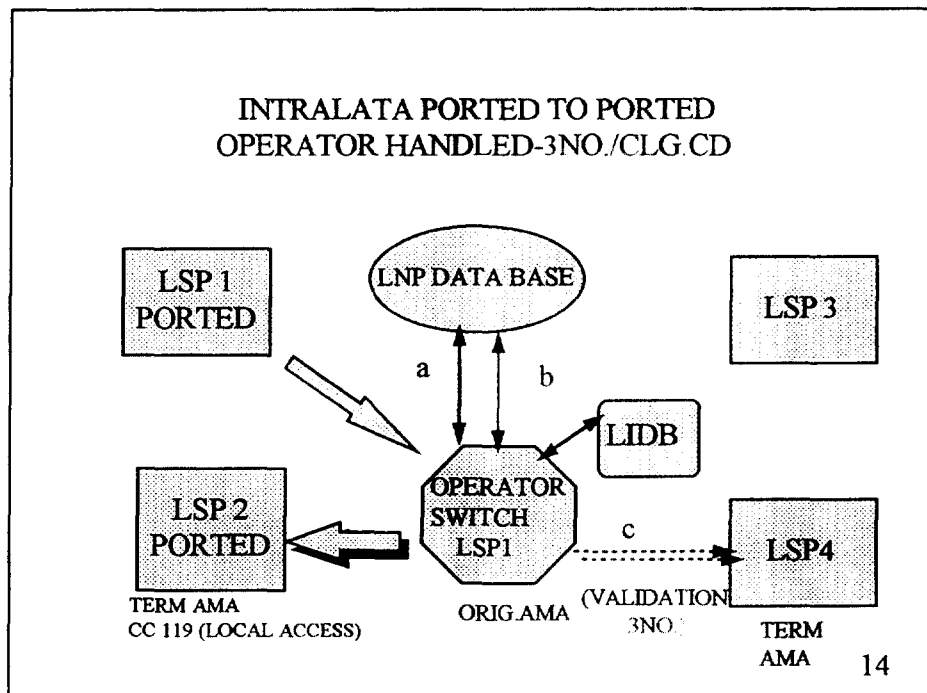
TERMINATING ACCESS IS CHARGED TO LSP1 BY LSP2 FOR ENTRY TO NETWORK TO REACH NON- PORTED NUMBER.

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**INTRALATA PORTED TO PORTED
OPERATOR HANDLED CLG CD/3NO**

- a. QUERY TO LNP TO ROUTE CALL
- b. QUERY TO LNP TO ROUTE CALL TO 3NO
- c. CALL TO 3NO TO VERIFY CHARGES

LSP1 OPERATOR SWITCH - ORIGINATING AMA FOR CLG CD/3NO.

LNP MODULE ADDED TO RECORDS FOR ORIGINATING CLG CD/3NO.

ORIGINATING AMA FOR CALL TO VERIFY 3NO CHARGES

LNP MODULE ADDED TO RECORD TO VERIFY 3NO.

LSP2 - TERMINATING AMA

CALL CODE 119 - TERMINATING ACCESS

(NEW CALL CODE - LOCAL ACCESS)

LSP4 - TERMINATING AMA - TERMINATING ACCESS CHARGED TO

LSP1- CALL CODE 119